MODIS Technical Team Meeting
Thursday, February 14, 2002
Building 33, Room E125
3:00 P.M.

Vince Salomonson chaired the meeting. Present were Skip Reber, Jack Xiong, Eric Vermote, Ed Masuoka, Shaida Johnston, Dorothy Hall, Barbara Conboy, Bruce Ramsay, Michael King, Wayne Esaias, Steve Kempler, and Bill Barnes, with Rebecca Lindsey taking the minutes.

1.0 Upcoming Meeting

- AGU, Spring, May 28-Jun 1, Washington, D.C.
- AMS, Atmospheric Radiation and Atmospheric Physics, first week of June, Odgen, Utah.
- MODIS Land Cover Meeting, June 3-5 (tentative), Greenbelt, MD
- IGARSS 2002, June 24-28, 2002 in Toronto (abstract deadline past)
- MODIS Community Outreach Workshop on MODIS Vegetation Variables (VI/LAI/FPAR/NPP), July 15-19th 2002, University of Montana, Missoula, MT
- MODIS Science Team Meeting, Tentative, July 22-24, 2002
- Remote Sensing of the Earth's Environment from Terra, a workshop at the International Summer School on Atmospheric and Oceanic Sciences, August 25-30, 2002, L'Aquila Italy
- 34TH COSPAR Scientific Assembly, October 10-19, 2002, in Houston, TX, (abstracts due 1 May)

2.0 Meeting Minutes

Salomonson asked Reber whether all the data product pages maintained by his staff were up to date with respect to data product quality status, showing all the products now considered validated. Reber thought so. He said that they would be working on the Aqua pages next.

The group discussed issues related to Aqua/Terra PGEs. There were two issues. First, there is uncertainty about versioning of PGEs, and what numbering systems would be allowed for Aqua. Barnes was under the impression that the first version for Aqua would have to begin with whatever the last Terra version was, e.g. “3.x” Masuoka said he thought *version* numbers could begin with 1.x for Aqua, but that the *collection* number would be “3” based on previous decision by the Science Team several years ago. It is possible that there is some rule that says that the first number in the list is actually the collection number, which would mean that they have to begin with “3.” Masuoka said that for each product, the user would get an ESDT that will say “MOD-something” for Terra, and “MYD-something” for Aqua. The file name will also include the collection number and the version number. The metadata will provide information on the version of the software that made it.

Salomonson wondered whether all this would be clear to the user. How would a user know what version for Terra and Aqua were used for making the same physical

parameter, e.g. SST? Masuoka said it is all in the metadata, but Salomonson was still concerned that a user would have trouble understanding all the naming conventions. King added that even the current naming system is not totally clear. Some on his staff had spent a day ordering data that they thought should have been produced with the most recent version of their code, but found it had not been. There was no way to tell from the file name, and these are experienced users. Salomonson said that is exactly the kind of thing that would put off a new or inexperienced user.

The second issue with respect to PGEs was whether they would remain separate for Aqua and Terra. Esaias said the tone of a memo he had seen suggested that the processes were going to be put together. Esaias said he thought we agreed several months ago to keep things absolutely separate, so that every time, for example, that they want to update Aqua code, they don't have to make a simultaneous delivery of Terra code as well. Masuoka thought that things would be separate enough to prevent that, but Esaias said a memo he had seen seemed to contradict that.

Masuoka said that he already had Robert Wolfe and Mike Teague looking into the issue of separateness, and that they would have to look into the issue of versioning as well.

Salomonson reported that with respect to the release of the introductory, interdisciplinary data sets, they were converging on the idea of having a CD with mean monthlies, at 1° resolution, equal angle projection with a higher-resolution jpeg image to show the user what the data are like at high resolution. Then on an ftp site, we would have the quality flags for oceans and the maximum, minimum, and standard deviations for atmosphere products. For land, they would also provide the .05° monthly or 32-day products, and for snow, they would have the 8-day products as well. For everything beyond that, we would just point to the web pages where they could order the data. We will also want to have a description of how the L3 products are made. Lindsey will find out whether modarch can host the ftp site.

Vermote said that he thought we originally talked about having 1 or 2 CDs. He would like to do two, and provide the land data at .25°. He said for land the 1° is very coarse, and users might not be impressed enough to pursue the data further. Hall said she agreed with that. Salomonson said that he had not been thinking that way, but granted that the point was substantive and would give it consideration. Vermote added that the data should be in HDF with the tool included on the CD.

<u>MODAPS Update</u>

Masuoka reported that they got the new power in, and they are getting hardware online. On the 20th of February he will be doing the MODAPS/SIPS part of the ORR. One issue had to do with the availability of products, including test products, etc., following the launch of Aqua. This issue will have to be examined carefully and, in the course of that examination, the policy with the Direct Broadcast of MODIS data will have be considered concurrently.

Masuoka said he is going to have a meeting to go through what we need to do to be sure we are on the "same page" with respect to Aqua, system architecture, Collection 4, and testing. They are going to go over the schedule with MCST, science disciplines, etc. The meeting is planned for 25-26 of February. He said he would be sending out an email saying what people need to do to prepare. The will summarize that meeting's discussion at PIP, and then the technical team meeting after that.

Salomonson raised the issue of band-to-band misregistration. He is not sure how we are going to handle this scientifically. Xiong said that the problem is worse for Aqua than Terra, about 20-30% of a pixel band-to-band registration error. Barnes said this certainly is a Science Team issue. They will need to modify their Level 2 algorithms to accommodate this increase in misregistration. Salomonson said he wanted to put this on the science team's "radar" as a matter needing some attention.

GES DAAC Update

Kempler reported that they are processing near the leading edge and are also working off year 2000 with the new algorithms while they wait for the team's next direction. They are also working on SAFARI data. He reported that the firewall had been causing order failures for a few weeks, but he thought things were smoothing out now. Several people disagreed. King, Hall, Xiong, and Vermote all said they or their associates had had trouble ordering data all week. Kempler asked that they each provide specifics so that he could investigate. Kempler added that a user on the AIRS Team accessed 10 GB of MODIS data in 40 minutes, a very good rate. Kempler said that they are ready for the Aqua ORR.

He had several points to address. First, staffing will be a problem when they go public, as the distribution staff is low. He is concerned about being able to thoroughly test 6A.05 prior to launch. He is thinking of sending someone to EDC to watch how the installation went with them, but they are apparently still having problems. Kempler also said that he is planning on pursuing the issue of L0 data holes on the team's behalf. Lastly, Kempler: reported that CERES wants a month and a half of sub-setted data resent to them. Salomonson said the priority ought to be 1) leading edge processing, 2.) SAFARI, 3.) CERES, and 4.) Year 2000.

MAST Update

Conboy said that the best date so far for the next MODIS Science Team Meeting seemed to be July 22-24. That is the same time as TRMM science meeting, however. King and Salomonson said they thought there shouldn't be a lot of conflict between the two meetings. Salomonson said that we set that as the tentative date.

Salomonson asked that as the team reviews the ATBDs and when they complete their review, they should reflect to the community that the ATBD is up-to-date and can be used confidently by the community by changing the dates on the web pages indicating when the ATBD was last reviewed. Some of the dates now on the Web associated with the ATBDs indicate that the ATBDs are several months to years old, suggesting they are not current. The team should notify the MODIS web master, Brandon Maccherone

(bmaccher@pop900.gsfc.nasa.gov), about any changes. Salomonson also urged the Science Team to look at the validation plans and update them. Send changes and updates to Maccherone.

NOAA-NESDIS Update

Ramsay reported that the installation of the new NOAA/NESDIS MODIS processing system server at NASA/GSFC, procured to handle larger volumes of near real time MODIS data, is nearly complete. Currently, NESDIS has limited quantities of North American products and even smaller volumes of L1A data flowing to Suitland and the NOAA Science Center in Camp Springs. The Operational Significant Event Imagery (OSEI) folks are using MODIS Direct Broadcast data from the University of Wisconsin to make images of Salt Lake City. Credit is being given to NASA for origin of the data. George Stephens, Team Leader, OSEI, provided the following http addresses for the images:
http://www.osei.noaa.gov/Events/Snow/US_West/SNWusW042_MO.jpg
http://www.osei.noaa.gov/Events/Snow/US_West/SNWusW043_MO.jpg.

Ramsay said that they didn't believe the imagery fell under the same domain as other products (i.e., PGEs) with respect to getting NASA review to make sure that products are being produced with the most current version of code, so they are going ahead with posting images. The feedback from OSEI is that the 250-meter data are awesome.

EOS Update

King said that his office is working on updating the EOS Data Products Handbook version 1, and he would like to have new imagery of each of the MODIS data products, different than what is in Volume 2. Every team with a product should look at the handbook, select new imagery, and check text details for accuracy. He also reported that Winnie Humberson is working on the color management issues involved in high-quality printing for the MODIS brochure. So the brochure is close to being done, and he hoped all reviews were going to be in soon. King added that he is working on a paper for a special issue on Aqua of TGARS and another one on SAFARI.

Oceans Update

Esaias reported that there had been a very successful Ocean Science Meeting in Hawaii. There were a number of MODIS talks that were great. He was surprised by the number of people using MODIS data and liking it. And they did a lot to correct misconceptions about the data. He said that Jim Yoder would like to come to the Aqua launch. He would send the necessary information to Conboy. Esaias wanted to thank Kempler for funding DAAC staff to come to the meeting and hold a live workshop/demonstration for how to get the data. He said there were about 20 people at the workshop. Finally, there was an NASA-GSFC/University of Miami press release going out that day about SST, saying MODIS is the best SST measurement in the world.

Concluding Remarks

Salomonson reported that Jim Simpson (University of California at San Diego) got a great briefing from Barnes and Xiong, and left here with considerable information he

didn't have before. Simpson uses a Fourier Transform approach to getting rid of striping, and Salomonson suggested to Dr. Simpson that it would be nice if he could communicate this work to Chris Moeller so it could be compared to the histogram equalization method. Simpson also gave a talk on using a neural network approach for snow mapping.

3.0 Action Items

3.1 Kempler to send Johnston his ORR charts.
Status: Closed.
3.2 Reber to send Justice the mailing list that has members of the DAWG.
Status: Open.
3.3 Discipline leads to meet to resolve the issue of beta-release code and science-quality code, and what we need to say about it.
Status: Open.
3.4 Technical team to discuss further the issue of predicted ephemeris data and how to improve it.
Status: Open.